Guide to task 1

screening and scoping of proposed water resources development projects

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A two-day course on
Principles and Practice of Health Impact Assessment in the Context of Water Resources Development

Guide to Task 1

Screening and scoping of proposed water resources development projects

Robert Bos and Peter Furu

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"Water and Health – Where Science Meets Policy"
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Water Institute and Institute for the Environment
University of North Carolina at Chapel Hill

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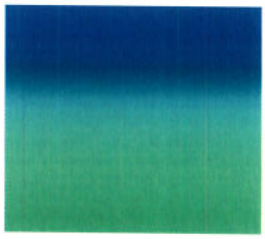


TASK GUIDE

Welcome to the first of two tasks on Health Impact Assessment that are part of the pre-Conference course of the International Conference "Water and Health – Where Science Meets Policy !

At the onset we should like to give you some general information and explanations that will help you carry out the tasks effectively. Throughout the two days of the course you and your fellow group members will provide mutual support in completing your assignments. Each one of you will contribute expertise and experience in accordance with your individual professional perspectives. In the process, you will familiarize yourself with some of the **concepts** and **principles** of HIA.

You will practise how to scan and analyse documents in an organised and efficient manner.

The learning process

The context for the Task work is provided by the Nam Theun 2 dam project in Lao PDR. You will receive background documents and web access for this project, allowing you to apply HIA procedures. Two Task Guides take you, on a step-by-step basis, through some of the key decision-making steps supporting an HIA.

Each page of the Task Guide provides you with information; at the bottom of each page you will find a question, and instructions to discuss the question in your group and to document the outcome of your discussion. You should NOT turn to the next page until the group unanimously feels the question has been adequately discussed and a consensus on the answer has been reached.

Important points

A **resource person** will be available to assist your group with issues it is unable to resolve. The resource person can be consulted at any time you feel the group cannot continue the Task without outside inputs. Issues that remain unresolved can be documented as part of the group report and raised for discussion at the concluding plenary session.

Time management is the key to successful completion of the two Tasks. At the start of each Task you should plan your activities with reference to the Table of Contents. You should monitor your progress at regular intervals. Remember that for the review of large documents you can divide the work among the individual members of your group.

Report writing and presentation: At the start of each Task, the group should appoint one of its members to document the outcome of its discussions, and to compile the outcomes into a brief report and an oral, ten-minute presentation. This rapporteur is not necessarily the same group member for both Tasks. If the group's findings are documented as it goes along, the report is basically ready on completing the Task.

On completion of this first task, you will have enhanced your knowledge about the concept of screening of development projects for the need to carry out an HIA and about the subsequent scoping exercise which sets the spatial and temporal boundaries for an HIA. If you have any questions about the introductory explanations on the course proceedings and method, please contact the organizer now ! If all is clear, then turn to page 3.

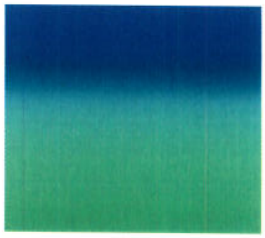
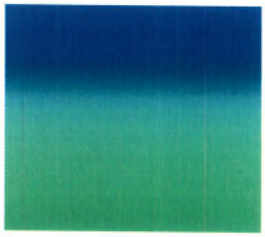


Table of contents



Timetable

A total of 4 hours will be available for this Task, following the briefing and introductory presentations.

10:30-12:30 Introduction Task 1
Group work on Task 1

12:30-13:30 Lunch

13:30-14:00 Plenary Q&A

14:00-15:30 Group work on Task 1 (continued)

15:30-15:45 Break/refreshments

15:45-16:15 Finish group work on Task 1 and prepare presentation

16:15-17:15 15 minutes presentation (per group) in plenary

Resource material

Hard copies:

Birley, M.H., M. Gomes and A. Davy (1997). Health aspects of environmental assessment. Environmental Assessment Sourcebook Update (# 18, July 1997), Environment Department, World Bank, Washington DC

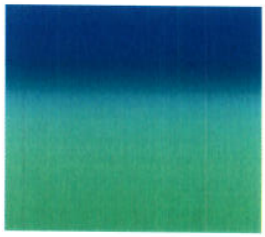
Peralta, G.L & Hunt, J.M. 2003. A Primer on health impacts of development programmes. Asian Development Bank.

Quigley, R., L. den Broeder, P. Furu, A. Bond, B. Cave and R. Bos. 2006. *Health Impact Assessment International Best Practice Principles. Special Publication Series No. 5*. Fargo, USA: International Association for Impact Assessment.

On CD ROM:

Birley, M.H. (1995). The Health Impact Assessment of Development Projects. HMSO, UK.

Nam Theun 2 project documents



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Task overview

Aim of the Task

The aim of this Task is to introduce you to the concept and basic principles of HIA and to the methods and procedures of HIA screening.

On completion of this Task, you and your team members will have a common understanding of HIA concepts and principles and you will share an understanding of HIA screening methods and procedures. Also, you will have developed skills in performing basic screening and optional rapid assessment as first steps in the HIA process.

Output

The output of this Task will be a screening report. The report will conclude with a recommendation whether the project under scrutiny, the Nam Theun 2 dam, should or should not undergo a full health impact assessment. The options are:

A: Serious health effects - a full HIA will be needed
B: Health effects known and considered – no HIA is needed
C: Negligible health effects - no HIA is needed

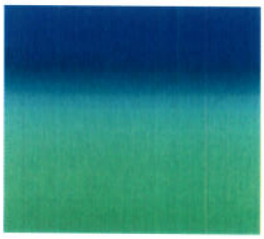
At the end of this Task, you will present a report of your findings. If this screening report comes to the conclusion that a full health impact assessment is indeed needed (option A), then in your group presentation also include conclusions and recommendations about the boundaries in time and space for the full HIA and list essential elements for the HIA Terms of Reference.

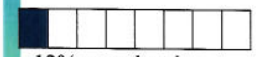
Each step in this Task ends with the requirement to write one or more short paragraphs, either on general conceptual HIA issues or on project-specific screening outcomes. Please document the results of you discussions for generic and project-specific question separately; the latter will make up your screening report.

Questions

Now here is your first question:
What is a Health Impact Assessment and what is its purpose?

Discuss this question in your group, note down the opinions of group members and try to arrive at a consensus. Then turn to the next page.





The purpose of HIA

HIA is an examination of a proposed development policy, plan, programme or project, in order to assess whether the community health status will be affected[1]. Healthy public policy options can then be selected or, in the context of a proposed project, safeguards and mitigating (*harm reducing*) measures can be proposed to protect the health of the community. In addition, in the same context the assessment can consider opportunities for health promotion.

Development projects are designed to confer benefits on the community, including improved standards of living and health. Sometimes, however, a project may have unintended and indirect negative effects. These can affect the environment, the socio-economic conditions or the health status of some community groups.

HIA provides a mechanism of early warning, allowing decision makers to review and modify project plans, design and operations by negotiation.

It should therefore be performed at a stage during the project cycle when it is still possible to make changes in structure, design and operation of the project.

The hidden costs that may be transferred to the health sector when the health impact of a development project is not assessed can be reduced or avoided by an effective HIA followed by proper health safeguards.

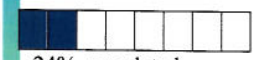
But the process of assessment also has its own costs. For each proposed development project it is essential to evaluate whether the assessment costs are proportional to the assessment benefits. On the basis of this evaluation an informed decision can be made whether or not to go ahead with an HIA.

Question

What procedure(s) do you think is (are) needed in order to make an informed decision whether or not a full HIA is appropriate?

Discuss in your group what criteria you would apply to address this question and what procedure you would follow to investigate the proposed project using these criteria in order to arrive at an informed answer to the question. Then turn to the next page.

[1] The official WHO/IAIA definition of Health Impact Assessment is: *A combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, programme or project on the health of a population, and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.(Quigley et al. 2006)*



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The HIA process

As you read through the procedure described in the following paragraphs, compare it with the suggestions of your group.

The start-up for an HIA is similar to the start-up for an Environmental Impact Assessment (EIA). Preferably, HIA and EIA should be part of a coordinated or integrated impact assessment approach at this stage.

Development projects are proposed by a project proponent to a regulatory authority. The proponent is a government department, a private company or a consortium of several private and/or public entities that want to undertake a project.

For example, the project proponent of the Nam Theun 2 hydropower dam project is the Nam Theun 2 Consortium and the lending institution is the Asian Development Bank.

The regulatory authority next embarks on a procedure known as **screening**. A number of criteria may be applied, usually in accordance with national EIA legislation or regulations. In many countries project size is an important criterion: all irrigation projects over a certain hectarage, or all tourist developments (hotels) with a capacity over and above a certain number of beds must undergo an impact assessment. Sensitive ecologies, vulnerable human communities or significant resettlement implications can also be among criteria. In most cases, screening is a desk exercise and does not require field visits.

During the screening a rapid assessment of hazards and risks will provide further arguments in favour or against a full HIA. Its information base is made up of the experience of the impact of projects of the same type in similar settings combined with a first, rapid assessment of possible health hazards, using available health data. It will also create a basis for the establishment of a framework and boundaries within which a full HIA can be performed. This is one element of the procedural step known as **scoping**.

Questions

Within the impact assessment regulations as they exist in each of your countries, would approval of the NT2 project be subject to EIA/HIA?

What have been the short-term and long-term health impacts of other, similar projects in the region of SE Asia?

How would you define health hazard, health risk, health determinant, health impact and health outcome?

Discuss these questions in your group, and document separately the answers to the project-specific questions and those concerning general definitions. Then turn to the next page.

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HIA - definitions

A structured approach to HIA requires a clear understanding of the distinction between the concepts of health hazard, promoter, risk factor, opportunity, determinant, impact and outcome.

Definitions

- A *health hazard* is an agent or a cause of ill-health.
- A *health promoter* is an agent or cause of well-being.
- A *health risk* is a measure of likelihood that and identified hazard causes harm to a particular group of people at a particular time and place.
- A *health opportunity* may relate to uncertain events or conditions that, if they occur, have positive consequences for health.
- *Health determinants* include a range of personal, social, economic, environmental and institutional factors which determine the health status of individuals or populations.
- A *health impact* is a synthesis of the changes in health risks and opportunities associated with a project.
- A *health outcome* is a change in the health status of an individual, group or population which is attributable to a planned intervention or series of interventions, regardless of whether such an intervention was intended to change health status.

Examples

Wuchereria bancrofti, the parasite that causes lymphatic filariasis, is a health hazard in many parts in the tropics. Lymphatic filariasis is, however, a very small health risk in the rural areas of tropical Asia, because the mosquitoes that transmit the infection breed mainly in the organically polluted waters of urban centres.

The kinetic energy of tractors is a health hazard in many agricultural production areas. The risk of an accident and injury as a health outcome, however, depends on various determinants of an environmental, personal, social, economic and/or institutional character.

- The local road infrastructure separating heavy traffic from pedestrians.
- The level of training of local farmers on safe driving.
- The maintenance of tractors.
- Special measures for the protection of vulnerable groups such as children.

Questions

Can you develop a generic classification of health hazards?
Based on the above definitions, can you make a statement about the difference between HIA and Health Risk Evaluation?
Can you come up with examples that illustrate the difference between hazards and risks in the context of the NT2 project?

Discuss the above questions. List the generic classification of hazards. Describe in two sentences the difference between HIA and Health Risk Evaluation. Add the examples deriving from the NT2 project to other information you are collecting on the project. Then move on to the next page.

48% completed

The HIA – first step

The first step in an HIA of a development project is the identification of health hazards, promoters and determinants within or in the vicinity of the project area.

Health hazards and health promoters can be classified in many different ways. It is proposed you use the following categories:

Categories

- ☐ Agents of communicable diseases
- ☐ Agents/causes of non-communicable diseases
- ☐ Causes of malnutrition
- ☐ Causes of injury
- ☐ Causes of psycho-social disorders
- ☐ Agents or causes of wellbeing

Assessing the impact is predicting the future. There may be data available on the present health status of different community groups. The question an HIA asks, however, is: what will their health status be during the different phases of the project and once the project becomes operational and at decommisioning?

Questions

Which three groups of determinants related to development projects in general will change the health status of affected communities?

What are two important parameters in setting the boundaries for your Health Impact Assessment?

How would you apply these to the Nam Theun 2 hydropower project?

Discuss these questions in your group. Keep the generic replies separate from the replies specific to the NT2 project and add the project-specific replies to other information you are collecting on NT2. Once your group has reached a consensus, compare your responses to the first two questions with the information provided on the next page.

60% completed

The HIA – second step

Three groups of health determinants can be distinguished behind the changes in the health status observed in communities affected by development projects: social determinants, environmental determinants and institutional determinants.

The **social determinants** of health (individual, family or community related factors) relate to biological and social fabric of communities: *e.g.* gender, age, immune status, traditional hierarchies, equity and power, distribution of wealth, occupational characteristics, generational conflicts and other aspects that may change with development.
The **environmental determinants** of health relate to the bio-physical environment in which the project will be established.
The **institutional determinants** of health comprise, for example, capacity and capability of the health system, jurisdiction, legislation and the role of non-health sector institutions in health.

The second step of the assessment is a thorough analysis of the various determinants, their possible change as a result of the project and an evaluation of their respective contribution to the overall health outcome.

Boundaries - you should consider two parameters:
□ The time horizon, i.e. the number of years in the future. Some diseases spread slowly through a community and may not become a widespread cause of ill-health for many years. Others spread very quickly and are an immediate cause for ill-health.

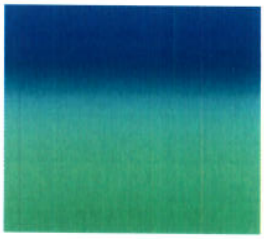
Examples: Malaria is a "fast" disease, while schistosomiasis is a "slow" disease. As a short-term problem, malnutrition will lead to wasting, on the long term it will lead to stunting. Exposure to high doses of hazardous chemicals will lead to acute toxic effects, while long term exposure to low doses will only come to expression after an extended period of time (e.g. cancer).

□ The geographic boundaries, i.e. the spatial delimitations of your HIA. The health hazards associated with a development project may stretch over considerable distances. For example, in a dam project, there may be significant health impacts downstream. Wind may carry industrial pollution over long distances. Population migration linked to seasonal labour in agricultural development schemes may favour the spread of infections from their originally confined area of distribution.

Within the boundaries agreed for the HIA, there will be many different community groups associated with the project. They are not only the different communities that inhabit the project area, they are also the groups that may temporarily enter the project area during a particular project phase, such as construction workers.

Question
Can you list the important community groups affected by the NT2 project within the boundaries your group has agreed upon?

Discuss this question and list community groups affected during one or more different stages of the project. Add this information to the other items on the NT2 project. Then turn to the next page.



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Vulnerable community groups

Whatever your listing may be, it is important to make a distinction between communities already in the project area and those who will be temporarily in the project area for one or more project stages.

As a reality check for the list you made, below are some examples of groups that have been recognised in earlier HIAs:

- Subsistence farmers and their dependants may be displaced from the project site. Many may be offered resettlement or re-employment on the scheme, the rest will move into uninhabited areas or drift into (peri-) urban areas
- Groups providing support services such as teachers, health workers and their dependants may move into the project area
- Settlers such as cash crop farmers plus dependants may be settled on new agricultural schemes. These will include members of displaced communities and some town dwellers
- Construction workers are usually males who are separated from their partners for many months or even several years
- Camp followers are attracted to construction sites and include food sellers and sex workers plus their dependants
- Fishing folk plus dependants may be attracted to new reservoirs
- Migrant labourers will establish a circulation pattern linked to cropping and harvesting seasons

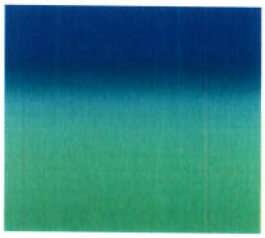
You have come to the end of your screening and scoping exercise.

The group may want to consolidate the outcomes referring specifically to the NT2 project in a summary table.

Please decide on your final recommendation concerning the desirability of a full HIA, and list recommended boundaries and essential components of an HIA Terms of Reference for consultants.

You may also want to list questions that were left unanswered during your group work for discussion in the plenary session.

Once you have finished with the above issues, move to the final page for instructions on your report and presentation.



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Summary screening and scoping

You have almost completed your first Task: Screening and scoping.

It is now suggested you complete your report and oral group presentation for the plenary session.

We have some suggestions for the oral presentation:

- ☐ Visual materials (overhead transparencies, flip chart sheet) contain not more than 15 words per page in large writing
- ☐ The presenter faces the audience and speaks loudly and clearly
- ☐ More than one member of the group is involved in the presentation
- ☐ Only the main points are discussed in the oral presentations, further detail is contained in the report

Your group presentation is scheduled as the last item in today's programme!

This concludes Task 1.

100% completed